

# Strategy Pattern Class Diagram

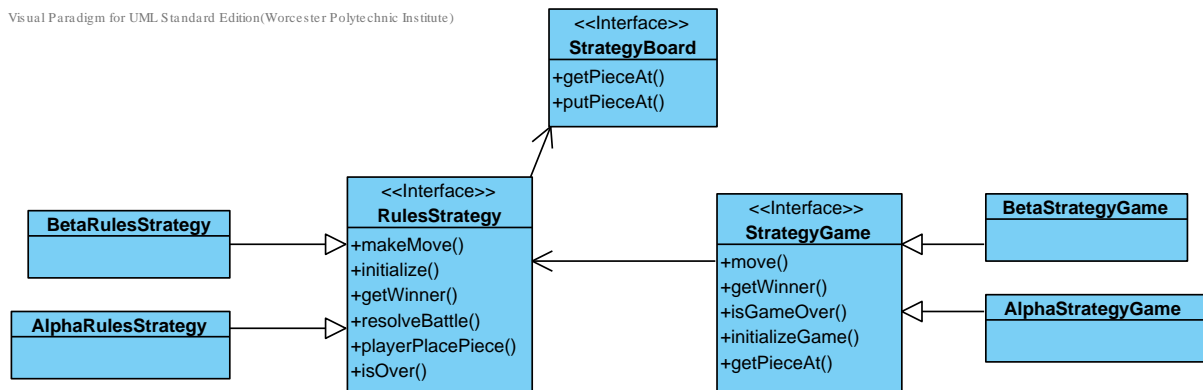
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# Class Diagram

## Strategy

Visual Paradigm for UML Standard Edition(Worcester Polytechnic Institute)



## Summary

| Name   | Documentation   |
|--|---|
|  StrategyBoard        | A StrategyBoard is responsible for maintaining and mutating the state of the game board.  |
|  RulesStrategy       | A RulesStrategy is responsible for maintaining and mutating the state of the game. Specifically, it handles moving pieces on the game board and resolving battles. It also checks victory conditions.   |
|  StrategyGame       | A StrategyGame is responsible for providing an interface between the client and the game. The concrete implementations contain RulesStrategy instances specific to the type of StrategyGames. The implementations of StrategyGame delegate most tasks to their RulesStrategy instances. |
|  BetaStrategyGame   |   |
|  BetaRulesStrategy  |   |
|  AlphaStrategyGame  |   |
|  AlphaRulesStrategy |   |

## Documentation

This is the Strategy Pattern as implemented in our Strategy project. RulesStrategy is actually an abstract class because it holds a few methods whose implementation is the same across all variations of RulesStrategy.

## Details

### StrategyBoard

## Operations

| public getPieceAt () |                                      |                                 |
|----------------------|--------------------------------------|---------------------------------|
| Static               | false                                |                                 |
| Leaf                 | false                                |                                 |
| Quality Score        | Fair                                 |                                 |
| Quality Reason       | Problem                              | Suggestion                      |
|                      | Name does not contain glossary terms | Define name as term in glossary |
| Ordered              | false                                |                                 |
| Unique               | true                                 |                                 |
| Query                | false                                |                                 |

| public putPieceAt () |                                      |                                 |
|----------------------|--------------------------------------|---------------------------------|
| Static               | false                                |                                 |
| Leaf                 | false                                |                                 |
| Quality Score        | Fair                                 |                                 |
| Quality Reason       | Problem                              | Suggestion                      |
|                      | Name does not contain glossary terms | Define name as term in glossary |
| Ordered              | false                                |                                 |
| Unique               | true                                 |                                 |
| Query                | false                                |                                 |

| public getDistance () |                                      |                                 |
|-----------------------|--------------------------------------|---------------------------------|
| Static                | false                                |                                 |
| Leaf                  | false                                |                                 |
| Quality Score         | Fair                                 |                                 |
| Quality Reason        | Problem                              | Suggestion                      |
|                       | Name does not contain glossary terms | Define name as term in glossary |
| Ordered               | false                                |                                 |
| Unique                | true                                 |                                 |
| Query                 | false                                |                                 |

## RulesStrategy

# Operations

| public makeMove () |                                      |                                 |
|--------------------|--------------------------------------|---------------------------------|
| Static             | false                                |                                 |
| Leaf               | false                                |                                 |
| Quality Score      | Fair                                 |                                 |
| Quality Reason     | Problem                              | Suggestion                      |
|                    | Name does not contain glossary terms | Define name as term in glossary |
| Ordered            | false                                |                                 |
| Unique             | true                                 |                                 |
| Query              | false                                |                                 |

| public initialize () |                                      |                                 |
|----------------------|--------------------------------------|---------------------------------|
| Static               | false                                |                                 |
| Leaf                 | false                                |                                 |
| Quality Score        | Fair                                 |                                 |
| Quality Reason       | Problem                              | Suggestion                      |
|                      | Name does not contain glossary terms | Define name as term in glossary |
| Ordered              | false                                |                                 |
| Unique               | true                                 |                                 |
| Query                | false                                |                                 |

| public getWinner () |                                      |                                 |
|---------------------|--------------------------------------|---------------------------------|
| Static              | false                                |                                 |
| Leaf                | false                                |                                 |
| Quality Score       | Fair                                 |                                 |
| Quality Reason      | Problem                              | Suggestion                      |
|                     | Name does not contain glossary terms | Define name as term in glossary |
| Ordered             | false                                |                                 |
| Unique              | true                                 |                                 |
| Query               | false                                |                                 |

| public resolveBattle () |                                      |                                 |
|-------------------------|--------------------------------------|---------------------------------|
| Static                  | false                                |                                 |
| Leaf                    | false                                |                                 |
| Quality Score           | Fair                                 |                                 |
| Quality Reason          | Problem                              | Suggestion                      |
|                         | Name does not contain glossary terms | Define name as term in glossary |
| Ordered                 | false                                |                                 |
| Unique                  | true                                 |                                 |
| Query                   | false                                |                                 |

| public playerPlacePiece () |                                      |                                 |
|----------------------------|--------------------------------------|---------------------------------|
| Static                     | false                                |                                 |
| Leaf                       | false                                |                                 |
| Quality Score              | Fair                                 |                                 |
| Quality Reason             | Problem                              | Suggestion                      |
|                            | Name does not contain glossary terms | Define name as term in glossary |
| Ordered                    | false                                |                                 |
| Unique                     | true                                 |                                 |
| Query                      | false                                |                                 |

| public isOver () |                                      |                                 |
|------------------|--------------------------------------|---------------------------------|
| Static           | false                                |                                 |
| Leaf             | false                                |                                 |
| Quality Score    | Fair                                 |                                 |
| Quality Reason   | Problem                              | Suggestion                      |
|                  | Name does not contain glossary terms | Define name as term in glossary |
| Ordered          | false                                |                                 |
| Unique           | true                                 |                                 |
| Query            | false                                |                                 |



## StrategyGame

### Operations

| public move () |                                      |                                 |
|----------------|--------------------------------------|---------------------------------|
| Static         | false                                |                                 |
| Leaf           | false                                |                                 |
| Quality Score  | Fair                                 |                                 |
| Quality Reason | Problem                              | Suggestion                      |
|                | Name does not contain glossary terms | Define name as term in glossary |
| Ordered        | false                                |                                 |
| Unique         | true                                 |                                 |
| Query          | false                                |                                 |

| public getWinner () |                                      |                                 |
|---------------------|--------------------------------------|---------------------------------|
| Static              | false                                |                                 |
| Leaf                | false                                |                                 |
| Quality Score       | Fair                                 |                                 |
| Quality Reason      | Problem                              | Suggestion                      |
|                     | Name does not contain glossary terms | Define name as term in glossary |
| Ordered             | false                                |                                 |
| Unique              | true                                 |                                 |
| Query               | false                                |                                 |

| public isGameOver () |                                      |                                 |
|----------------------|--------------------------------------|---------------------------------|
| Static               | false                                |                                 |
| Leaf                 | false                                |                                 |
| Quality Score        | Fair                                 |                                 |
| Quality Reason       | Problem                              | Suggestion                      |
|                      | Name does not contain glossary terms | Define name as term in glossary |
| Ordered              | false                                |                                 |
| Unique               | true                                 |                                 |
| Query                | false                                |                                 |

| public initializeGame () |                                      |                                 |
|--------------------------|--------------------------------------|---------------------------------|
| Static                   | false                                |                                 |
| Leaf                     | false                                |                                 |
| Quality Score            | Fair                                 |                                 |
| Quality Reason           | Problem                              | Suggestion                      |
|                          | Name does not contain glossary terms | Define name as term in glossary |
| Ordered                  | false                                |                                 |
| Unique                   | true                                 |                                 |
| Query                    | false                                |                                 |

| public getPieceAt () |                                      |                                 |
|----------------------|--------------------------------------|---------------------------------|
| Static               | false                                |                                 |
| Leaf                 | false                                |                                 |
| Quality Score        | Fair                                 |                                 |
| Quality Reason       | Problem                              | Suggestion                      |
|                      | Name does not contain glossary terms | Define name as term in glossary |
| Ordered              | false                                |                                 |
| Unique               | true                                 |                                 |
| Query                | false                                |                                 |

 **BetaStrategyGame**

 **BetaRulesStrategy**

 **AlphaStrategyGame**

 **AlphaRulesStrategy**